

Title (en)

CARBON FIBER PRECURSOR ACRYLIC FIBER, CARBON FIBER, AND MANUFACTURING METHOD FOR SAME

Title (de)

KOHLENSTOFFFASERVORLÄUFERACRYLFASER, KOHLENSTOFFFASER UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

FIBRE ACRYLIQUE PRÉCURSEUR DE FIBRE DE CARBONE, FIBRE DE CARBONE ET SON PROCÉDÉ DE FABRICATION

Publication

EP 3584358 A4 20200122 (EN)

Application

EP 18753555 A 20180216

Priority

- JP 2017026727 A 20170216
- JP 2018005500 W 20180216

Abstract (en)

[origin: EP3584358A1] A first aspect of the present invention is carbon fiber wherein the surface of a monofilament has a center line average roughness Ra of 6.0 nm or more and 13 nm or less, and the monofilament has a long diameter/short diameter ratio of 1.11 or more and 1.245 or less. A second aspect of the present invention is carbon fiber precursor acrylic fiber wherein the surface of a monofilament has a center line average roughness Ra of 18 nm or more and 27 nm or less, and the monofilament has a long diameter/short diameter ratio of 1.11 or more and 1.245 or less. The carbon fiber according to the first aspect is obtained by stabilizing and carbonizing under specific conditions the carbon fiber precursor acrylic fiber according to the second aspect.

IPC 8 full level

D01F 6/18 (2006.01); **D01D 5/253** (2006.01); **D01F 6/38** (2006.01); **D01F 9/22** (2006.01)

CPC (source: EP KR US)

D01D 5/0046 (2013.01 - US); **D01D 5/253** (2013.01 - EP); **D01F 6/18** (2013.01 - KR US); **D01F 6/38** (2013.01 - EP); **D01F 9/22** (2013.01 - KR US); **D01F 9/225** (2013.01 - EP); **D10B 2101/12** (2013.01 - US); **D10B 2401/061** (2013.01 - US); **Y02E 60/50** (2013.01 - EP)

Citation (search report)

No further relevant documents disclosed

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3584358 A1 20191225; **EP 3584358 A4 20200122**; **EP 3584358 B1 20211229**; CN 110300819 A 20191001; CN 110300819 B 20220607; HU E057996 T2 20220628; JP 2021059834 A 20210415; JP 2023011895 A 20230124; JP 6819701 B2 20210127; JP 7494889 B2 20240604; JP WO2018151255 A1 20191107; KR 102273974 B1 20210706; KR 102385506 B1 20220411; KR 20190103443 A 20190904; KR 20210082564 A 20210705; PT 3584358 T 20220127; US 11959197 B2 20240416; US 2020002850 A1 20200102; WO 2018151255 A1 20180823

DOCDB simple family (application)

EP 18753555 A 20180216; CN 201880012166 A 20180216; HU E18753555 A 20180216; JP 2018005500 W 20180216; JP 2018568628 A 20180216; JP 2020218693 A 20201228; JP 2022178730 A 20221108; KR 20197024424 A 20180216; KR 20217020103 A 20180216; PT 18753555 T 20180216; US 201916541352 A 20190815